

LinkPort[®]

Complex LinkPort

**PCMCIA Ethernet
Card**

ENET-B

User's Manual
Version 1.7C



Compex LinkPort

PCMCIA Ethernet Card

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Version 1.7C

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Manual Revision by Leon Enriquez

Important Information

The latest updates and changes after the release of this manual can be found in the **RELEASE.TXT** file in the latest **Compex LinkPort** release diskette.

DECLARATION OF CONFORMITY

Manufacturer's Name: *Compex, Inc.*
Manufacturer's Address: *4051 E. La Palma, Unit A*
Anaheim, CA 92807 U S A

Compex, Inc. declares that the product:

Product Name: *Compex LinkPort,*
PCMCIA Ethernet Card
Model Number: *ENET-A*

conforms to the following Product Standards:

Radiated Emission EN55022B
Standards: FCC Part 15 Class B
Conducted Emission EN60555PT2 conducted emission
Standards: EN55022B conducted emission
FCC Part 15 Class B
Immunity Standards: IEC 801-2
IEC 801-3
IEC 801-4

Therefore, this product is in conformity with the following regional standards:

FCC Class B — following the provisions of FCC Part 15 directive.
CE Mark — following the provisions of the EC directive.

Singapore, October 1999

Dr Jackson Lam,
R & D Manager

European Contact:

ReadyLINK Networktechnology Gmbh, *Technical Support,*
Albert Einstein Straße 42,
63322 Rödermark, Germany.
[FAX: +49 (60) 749-0668]

FCC Notice

This device has been tested and found to comply with the limits for a **Class B** digital device, pursuant to **Part 15 of the FCC Rules**. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❑ Reorient or relocate the receiving antenna.
- ❑ Increase the separation between the computer and receiver.
- ❑ Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- ❑ Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, *and*
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Contents

<i>Chapter 1:</i>	Introduction	1-1
<i>Chapter 2:</i>	Installing the Adapter	2-1
<i>Chapter 3:</i>	Software Installation	3-1
<i>Appendix A:</i>	Technical Information	A-1
<i>Appendix B:</i>	Technical Support	B-1

NOTES

Chapter 1

Introduction

The **Compex LinkPort PCMCIA** (Personal Computer Memory Card International Association) **Ethernet card [ENET-B]** is a credit card sized network adapter that can be used for PCMCIA compliant personal computers.

The Compex LinkPort PCMCIA Ethernet card plugs into a Type II PCMCIA slot, providing a 16-bit bus interface. The card is switchless, software configurable, and provides full support for the PCMCIA Card Information Structure (CIS).

The card is supplied with a media coupler that provides a BNC coaxial 10Base-2 connector, and a UTP (Unshielded Twisted-Pair) 10Base-T connector.

Also included is an intelligent **Enabler** program that automatically detects your PC's controller type and recognises previously installed card and socket services.

Features

- ≥ Conforms to IEEE 802.3, PCMCIA Release 2.1, JEIDA 4.1 Standard.
- ≥ Fits into Type II PCMCIA slot.
- ≥ Provides 68-pin connector for attachment to PC and 15-pin flat connector for attachment to media coupler.
- ≥ Media coupler incorporates RJ-45 10Base-T UTP connector and BNC 10Base-2 coaxial connector.
- ≥ Switchless design; hardware settings are software configurable.
- ≥ Low power consumption.
- ≥ Extensive software driver support which includes drivers for Novell NetWare; NDIS driver for Microsoft LAN Manager; drivers for Microsoft Windows for Workgroups, Windows 95, Windows NT v3.51, Windows NT v4.0; Packet Driver applications; LANtastic v6.0; and IBM OS/2 Warp.
(Refer to the driver diskette for the latest updated list.)

Hardware Description

≥ PCMCIA card

The Complex LinkPort PCMCIA Ethernet card's main PCB board is encased in a stainless compact frame. It has a 68-pin connector that fits into a PCMCIA socket, and a 15-pin flat connector that connects to the media coupler.

≥ Media Coupler

Media coupler incorporates RJ-45 10Base-T UTP connector and BNC 10Base-2 coaxial connector.

≥ LED Indicators

↙ **ACT LED** (*Colour: orange*) *Function:* Monitors signals transmitted to and received from the network.

The orange LED, labelled **ACT**, lights up to indicate that the PCMCIA Card is transmitting signals to and/or receiving signals from the network. This LED is normally OFF. It will flash when the card transmits signals to the network. The speed at which the LED flashes increases with the level of network traffic.

↙ **LINK LED** (*Colour: green*) *Function:* Monitors link status of twisted-pair connection. The PCMCIA Card supports the link integrity test function. This function is automatically enabled when the card is configured for RJ-45 UTP cabling. The green LED, labelled **LINK**, lights up to indicate that a valid 10Base-T link has been established. It is ON under normal operating conditions. If the LED is OFF, check the RJ-45 port's cable connection.

Note: The **LINK LED** only monitors the 10Base-T (RJ-45) connection. To check the condition of the BNC link, run the diagnostics program.

Diagrams

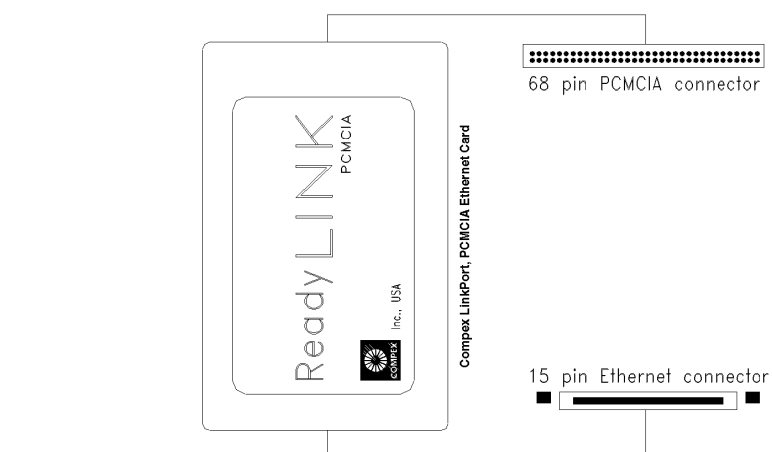


Figure 1-1: Compex LinkPort PCMCIA Ethernet Card

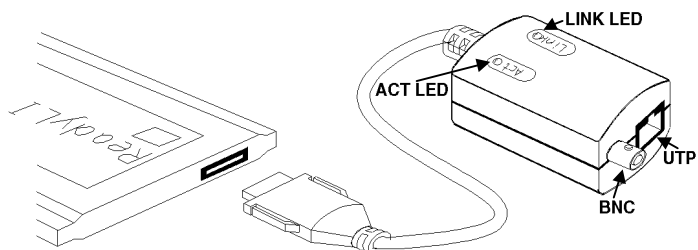


Figure 1-2: Media Coupler with UTP and BNC connectors

Chapter 2

Installing the Adapter

This chapter describes the procedure for installing the **Compex LinkPort PCMCIA Ethernet Card**.

Procedure:

1. Power OFF the host computer.
2. Insert the **Compex LinkPort PCMCIA Ethernet Card** into the computer's PCMCIA slot.

Insert the 68-pin connector on the card into the computer's PCMCIA slot. The label on the card should face up. Slide the card all the way into the slot.

3. Plug the media coupler into the card's 15-pin connector.
4. Connect the media coupler to the network.
 - ☐ Using UTP cable *or*
 - ☐ Using BNC cable

☐ **Using UTP (10Base-T) cable:**

Plug the free end of the UTP cable into a RJ-45 mating connector on a twisted-pair hub, or into a network access port.

❑ **Using BNC (thin coaxial) cable:**

Using thin coaxial cable: Connect a T-connector to the BNC connector on the media coupler. Attach both ends of the T-connector to thin coaxial cables. If the card is at the end of the network segment, install a 50-ohm terminator at the open end of the T-connector. Do this carefully to prevent accidental shorts which may disrupt network operation.

5. Power ON the PC.

Hardware installation is now complete. Switch ON the PC. The Compex LinkPort PCMCIA Ethernet Card receives its power from the PC.

Warning: To avoid accidents, do not connect or disconnect cables, or perform installation or maintenance of the card during an electrical storm.

Removing the Card:

Procedure:

To remove the **Compex LinkPort PCMCIA Ethernet Card** from the PC, do as follows:

- 1.** Power OFF the machine.
- 2.** Remove from the coupler the UTP cable from the RJ-45 socket; or if coaxial cable, the T-connector from the BNC socket.

-
3. Remove the media coupler from the **Compex LinkPort PCMCIA Ethernet Card**. To do this, squeeze the locking arms on either side of the coupler-to-card connector. Pull to unplug the media coupler.
 4. Remove the card from the slot. Store it together with the coupler in a safe place.

Diagrams

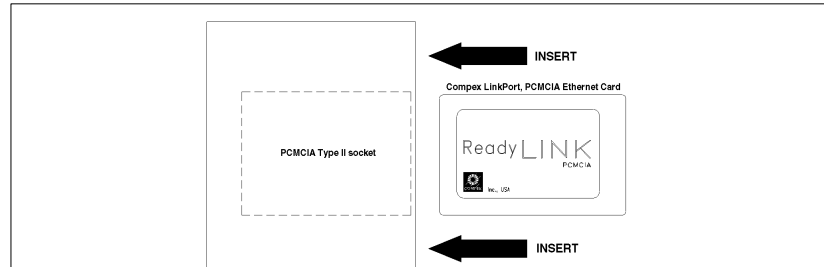


Figure 2-1: Inserting the Card into the Type II PCMCIA socket

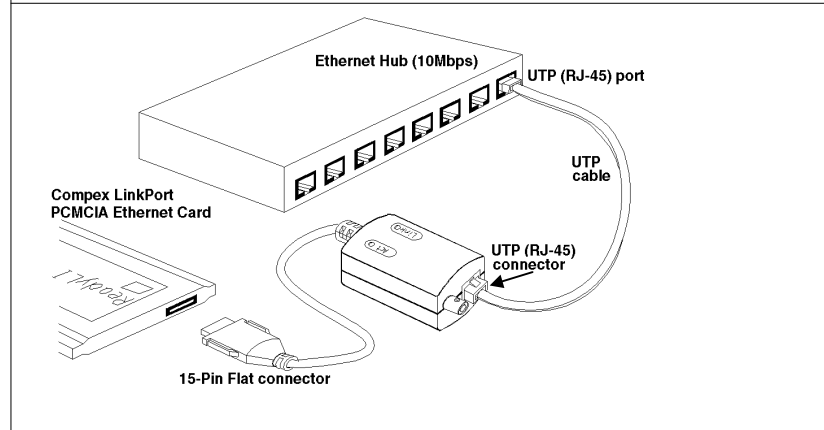


Figure 2-2: Plug the 15-pin connector to the 15-pin mating connector

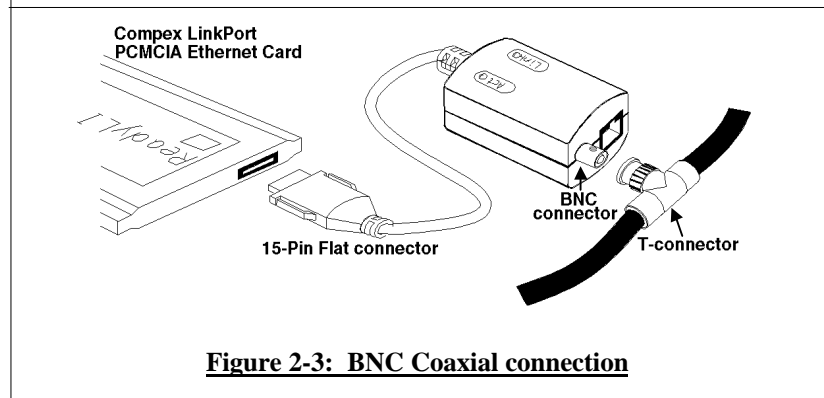


Figure 2-3: BNC Coaxial connection

Chapter 3

Software Installation

Introduction:

Enabler program: Lanenb.EXE

└**LANENB enabler** is provided to configure Complex LinkPort ENET-B in DOS environment.

└Before any driver (either loaded from Config.sys or Autoexec.bat or any batch file) can initialize the adapter, **LANENB** must be run first to configure it.

└If PCMCIA Card and Socket Services software is run in the machine, **LANENB.EXE** must run immediately after this (Card and Socket Services) software is loaded, but before loading the network driver.

└**LANENB.EXE** cannot be unloaded. The machine must reboot and **LANENB.EXE** re-run to change to a new I/O Address and Interrupt Number.

To run **LANENB.EXE**, insert the driver diskette in drive A:\ and type the following:

A:LANENB [/IRQ=dd] [/IOP=XXX]

A:LANENB [/HLP] or [/?]

A:LANENB [/CHK]

where:

[/IRQ] Interrupt line keyword of the adapter.

[/IOP] I/O Base Address keyword of the adapter.

dd is a one/two digit number representing the interrupt line (Valid value: 3, 4, 5, 7, 9, 10, **11***, 12, 15). [***Default IRQ**]

XXX is a 3-digit hex number representing I/O port base address (Valid value: 200H to 3E0H in steps of 20H.

MMMM Is a 4-digit hex number representing attribute memory address (Valid value: C800, CC00, D000, D400, D800, DC00)

/? Help message

Note: The default interrupt line number for the adapter is **5**. Notebook computers with built-in sound chips may also be using this Interrupt value. If you encounter such a situation, it is best to configure the adapter to a another Interrupt number such as 10 or 11 to avoid any conflicts.

Before beginning the installation procedure, make a backup Copy diskette and use the Copy for installation. Store the original diskette in a safe place.

LANENB.EXE utility

To configure the **Compex LinkPort PCMCIA Ethernet Card** properly, you should first run the **LANENB.EXE utility**. Enter the following at the DOS prompt:

For example:

LANENB.EXE /int:5 /port:300

The following message will appear:

**Socket: 0
IRQ Number: 05
I/O PORT BASE: 0300H
Memory Address: D400H**

The **Compex LinkPort PCMCIA Ethernet Card** is now configured and you are ready to load the network drivers.

Network Operating Systems (NOS)

Installation steps for all the Network Operating Systems (NOS) connection are documented in the respective directories of the particular NOS, in the Driver Disk. Please refer to these documents to install the network driver for the adapter.

As new and updated Network Operating Systems become available, update drivers and new release disk will be made available in the Compex Website, FTP site and BBS servers. For details, refer to Appendix B.

NOTES

Appendix A

Technical Information

Compex LinkPort PCMCIA Ethernet Card	
System Configuration	PCMCIA compliant computers
Standard Conformance	IEEE 802.3 standard, PCMCIA release 2.1 Type II, JEDIA 4.1
Bus-Width	16-bit
I/O Base Address	200H to 3E0H in steps of 20H; Default IOP: *300H
Interrupt	3, 4, *5 , 7, 9, 10, 11, 12, 15. (*Default IRQ)
Media Coupler	UTP RJ-45 (10Base-T) connector, and BNC coaxial (10Base-2) connector.
Card Dimensions	85mm x 54mm x 5mm
Power Requirement	BNC Transceiver: +5V/ 0.28A max.* (* typical); UTP: +5V/ 0.16A max. *
Temperature	0°C to 55°C (standard operating); 32°F to 131°F.
Humidity	10% to 90% (Non-condensing)

NOTES

Appendix B

Technical Support

If you encounter a specific problem and need our assistance, this appendix explains how you can get Technical Support worldwide from Compex.

When you have a problem

When you encounter a problem, please do the following:

- ◆ Ensure that you have sent in the product's Warranty Registration Card. The card qualifies you as being eligible for customer support.
- ◆ If there is a diagnostic program, run it. This helps identify the cause of the problem, which may be something you could repair by yourself.
- ◆ Contact your place of purchase to see if your network vendor can solve the problem.

If your adapter is still not functioning correctly, seek help from our Technical Support Specialists.

Before contacting technical support

For faster service, get ready the following facts before you talk to our Technical Support Specialist.




-
- ◆ A description of the problem. Include in your description, the sequence of events that led to the problem and the duration of the problem. State whether you can reproduce the problem.
 - ◆ A list of the products — software and hardware — involved in the problem, e.g., your computer model and type, DOS version, and the type and version of network operating system (NOS) and other applications.
 - ◆ Network information, including the network topology, type of cable used, size of network, number of workstations in the network, etc.
 - ◆ The network adapter settings and the settings of the other adapters (if any) in the system.
 - ◆ A list of all the recent system configuration changes, including hardware, operating system and application software, network and system administration procedures.

With this information, our Technical Support Specialists will be better able to help you solve the problem.




Technical Support Centers

Contact the technical support center that services your location.




U.S.A., Canada, Latin America and South America

 Write	Compex, Inc. 4051 E. La Palma, Unit A Anaheim, CA 92807, USA
 Fax	Tel: (714) 630-7302 (8 a.m.-5 p.m. Pacific time) Fax: (714) 630-6521
 Call	BBS: (714) 630-2570 (24-hour access)

Europe

 Write	ReadyLINK Networktechnology GmbH Albert Einstein Straße 42 63322 Rödermark, Germany
 Fax	Tel: ++49 (0) 6074 - 98017 (8 a.m.-5 p.m. local time) Fax: ++49 (0) 6074 - 90668
 Call	BBS: ++49 (0) 6074 - 93974 (24-hour access)

Asia, Australia, New Zealand, Middle East and the rest of the World

 Write	Compex Systems Pte Ltd 135, Joo Seng Road #08-01, PM Industrial Building Singapore 368363
 Fax	Tel: (65) 286-1805 (8 a.m.-5 p.m. local time) Fax: (65) 283-8337
 Call	BBS: (65) 282-8854 (24-hour access)

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